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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,128	09/22/2003	Michael E. Thomas	H0003933-US	5400

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SPOKANE, WA 99201

EXAMINER

SHEEHAN, JOHN P

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/665,128

Applicant(s)

THOMAS ET AL.

Examiner

John P. Sheehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 10-12, 16, 18, 19, 21-23, 26 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-15, 17, 20, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election with traverse of Species IX in the reply filed on September 7, 2004 is acknowledged. Applicants' traversal states that;

Applicant notes that elements of the species set forth by the examiner are narrower than the elements recited in the claims. For instance, the claims are not limited to an alloy having a base element as set forth in the Examiner. Further, the language utilized to set forth each of the species in the present action is unclear and appears to require a base element, an element selected from element groups 1, 5, 6, 8, 9 and 10, and to further require an additional element from the group set forth by the examiner in each delineated species. None of the claims recite this limitation and applicant is therefore not required to so limit the claims. Applicant therefore traverses the species restriction requirement and requests withdrawal or modification to clarify the restriction.

2. This is not found persuasive. None of applicants' claims recite proportions, but rather with respect to composition require only two or more elements selected from Groups 1, 5, 6, 8, 9 and 10 of the periodic table. Thus, regarding the composition, the claims encompass any and all combinations of elements selected from groups 1, 5, 6, 8, 9, and 10 of the periodic table, that is, any and all combinations of the 24 elements in groups 1, 5, 6, 8, 9, and 10 of the periodic table. This myriad of alloy combinations includes compositions having a base metal, that is, alloy compositions wherein an element is present in an amount of 50% by weight or more and also alloy compositions wherein there is no base metal, that is, there is no metal present in an amount of 50%

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by weight or more. Accordingly, in view of the lack of composition proportions the claims encompass embodiments wherein:

(1) There is one element as a base metal, that is, a metal present in an amount of 50% by weight or more, selected from groups I, 5, 6, 8, 9, and 10 of the periodic table combined with at least additional element selected from groups I, 5, 6, 8, 9, and 10 of the periodic table, hence Groups I to XXI of the election requirement, wherein each of the groups is directed to a different base metal; and

(2) There is no base metal, that is there is no metal present in an amount of 50% by weight or more, and the claims encompass any combination of at least two elements selected from groups I, 5, 6, 8, 9, and 10 of the periodic table, hence Group XXII of the election requirement.

This interpretation of the claims by the Examiner is consistent with applicants' specification, for example see page 5, paragraph 0013 of the applicants' specification. The Examiner hopes that this explanation clarifies the election of species requirement for the applicants.

In view of applicants' election of the Group IX invention which in the election requirement is described as;

IX. Tantalum based alloys containing at least one element selected from the groups 1, 5, 6, 8, 9 and 10 of the periodic table that at least one element selected from the group consisting of hydrogen, lithium, sodium, potassium, rubidium, cesium, francium, vanadium, niobium, chromium, molybdenum, tungsten, iron,

ruthenium, osmium, cobalt, rhodium,
iridium, nickel, palladium and platinum.
(emphasis added by the Examiner).

applicants are considered to have elected tantalum based sputtering components, that is, sputtering components wherein tantalum is present in an amount of at least 50% by weight. Applicants have indicated that claims 24 and 25 read on the elected species and that claims 1 to 9, 13 to 15, 17 and 20 are generic to the elected species.

Accordingly, generic claims 1 to 9, 13 to 15, 17 and 20 and species claims 24 and 25 are now subject to examination. Claims 10 to 12, 16, 18, 19, 21 to 23, 26 and 27 are withdrawn from further consideration as drawn to nonelected claims (non-elected claims 28 to 41 having been cancelled).

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

3. The information disclosure statement filed January 12, 2004 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of Japanese Patent Document No. 1092338 that is not in the English language. Japanese Patent Document No. 1092338 has been placed in the application file, but the information referred to therein has not been considered. The other references cited in said IDS have been considered by the Examiner.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 to 7, 9, 13, 14, 17, 20, 24 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Schussler et al. (Schussler, US Patent No. 3,592,639).

Schussler teaches a single phase tantalum based alloy containing tungsten (Abstract of the Disclosure and column 1, line 71). Schussler teaches a specific example alloy containing, in addition to tantalum and tungsten, columbium (niobium), hydrogen, molybdenum, cobalt, iron, vanadium, nickel and chromium (column 3, lines 40 to 60). The tungsten, columbium (niobium), hydrogen, molybdenum, cobalt, iron, vanadium, nickel and chromium of Schussler's example alloy are all encompassed by the applicants' claims language,

two or more elements in elemental form;
each of the two or more elements being
selected from groups 1, 5, 6, 8, 9 and 10
of the periodic table.

Applicants' claimed invention does not distinguish over Schussler.

6. Claims 8 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishihara et al. (Ishihara, Japanese Patent Document No. 1-230767).

Ishihara teaches specific examples of tantalum based sputtered films containing niobium (page 412, the Table).

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7. Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Dohjo et al. (US Patent No. 5,170,244).

Dohjo teaches specific examples of tantalum based sputtered films containing molybdenum (columns 5 and 6, the Table).

Claim Rejections - 35 USC § 102/103

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 8 and 15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schussler.

Schussler teaches as set forth above. Further, Schussler teaches that the disclosed alloy is worked down to a thickness of 0.01 to 0.02 inches (column 4, lines 31 to 39). Such an alloy thickness is encompassed by the alloys films recited in applicants' claims 8 and 15.

The claims and the references differ in that the references do not teach the process step of "sputter-deposited" recited in the claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the process step recited in applicants' product by process claims does not necessarily lend patentability to the claimed product, MPEP 2113.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

It is noted that the use of a rejection under 35 USC 102/103 for product by process claims as set forth above has been approved by the courts, see MPEP 2113.

"[T]he lack of physical description in a product-by-process claim makes determination of the patentability of the claim more difficult, since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not of the recited process steps which must be established. We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or section 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

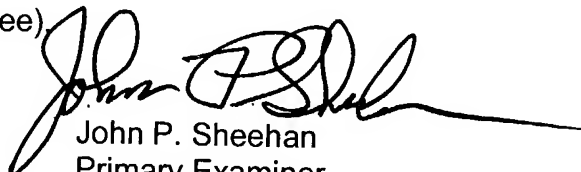
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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John P. Sheehan
Primary Examiner
Art Unit 1742

jps